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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,130	07/11/2001	Tatsuya Watanuki	16869P026700	2398

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/904,130

Applicant(s)

WATANUKI ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 12, 21 and 26 are objected to because of the following informalities: When Applicant amended the independent claims, Applicant made a spelling error in referring to a *ling group number*. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The newly amended claims refer to *electronically cutting off and shutting down communication lines* in order to disable a data port and further doing so by *removing power from circuitry comprising said data ports*. One of ordinary skill in the art would not know how to *electronically cut off and shut down communication lines by removing power from circuitry* based on the written description given. The Examiner is unaware of any technology that would *electronically cut off* a communication line or motivation to do so. The Examiner requests that Applicant give clear evidence on how this technology works to overcome the enablement requirement. The Examiner further requests that Applicant verify if the Japanese foreign priority document submitted does clearly explain the technology, and to check whether this is a problem in the English translation of the Japanese foreign priority document. The Examiner is further unaware of what Applicant means by *according to Link Aggregation multiplexing*. The Examiner is aware of the bounds of link aggregation and multiplexing, but is unaware of any specific requirements that are involved in *Link Aggregation multiplexing* which would

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differentiate it from multiplexing. Applicant is requested to explain these differences within the specification so as to allow one of ordinary skill in the art to understand how to implement the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 5, 12-13, 16, 21-22 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Raj et al. (U.S. Patent No. 6,628,649).

6. In regard to claim 1, Raj discloses a controller [LSC] that includes a data switch. The data switch has input [*first group*] and output [*second group*] ports for receiving and transmitting data. The transfer of data can be rerouted upon detection of a fault in the first switch control mechanism [*disabl(ing) all data ports...in response to detecting that data communication is not available...*]. [See Raj, column 9, lines 9-17. See Raj, column 9, lines 28-41. See Raj, column 10, lines 37-47.] Raj transmits all data on a single path or *unipath*. This is *multiplexing in accordance with Link Aggregation multiplexing*. Raj includes a *port management table*. See Raj, column 23, line 59 – column 24, line 20. Rerouting the data transfer is *electronically cutting off and shutting down communication lines connected to said data ports*.

Connecting a port to a communication line is inherent. By this rationale claim 1 is rejected.

7. In regard to claim 2, Raj is applied as in claim 1. Raj further discloses reanalyzing the network on a periodic basis to determine which routs are operating properly [*enable all data ports...to determine if communication is available...and to disable all of said data ports if...communication is not available*]. [See Raj, column 13, line 66 – column 14, line 14] By this rationale claim 2 is rejected.

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8. In regard to claim 5, Raj is applied as in claim 1. Raj discloses a means for detecting a fault condition within at least one of the switch control mechanisms in the Asynchronous Transfer Mode switch. Detecting a fault condition within the switch control mechanism is considered to be equivalent to *monitor[ing]...for hardware error conditions*. [See Raj, column 13, lines 9-12] By this rationale claim 5 is rejected.

9. In regard to claim 12, the limitations of this claim are substantially the same as the limitations embodied within claim 1. Therefore the grounds for rejection previously applied against claim 1 are likewise applicable against claim 12. By this rationale claim 12 is rejected.

10. In regard to claim 13, the limitations of this claim are substantially the same as the limitations embodied within claim 2. Therefore the grounds for rejection previously applied against claim 2 are likewise applicable against claim 13. By this rationale claim 13 is rejected.

11. In regard to claim 16, the limitations of this claim are substantially the same as the limitations embodied within claim 5. Therefore the grounds for rejection previously applied against claim 5 are likewise applicable against claim 16. By this rationale claim 16 is rejected.

12. In regard to claim 21, the limitations of this claim are substantially the same as the limitations embodied within claim 1. Therefore the grounds for rejection previously applied against claim 1 are likewise applicable against claim 21. By this rationale claim 21 is rejected.

13. In regard to claim 22, the limitations of this claim are substantially the same as the limitations embodied within claim 2. Therefore the grounds for rejection previously applied against claim 2 are likewise applicable against claim 22. By this rationale claim 22 is rejected.

14. In regard to claim 25, the limitations of this claim are substantially the same as the limitations embodied within claim 5. Therefore the grounds for rejection previously applied against claim 5 are likewise applicable against claim 25. By this rationale claim 25 is rejected.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 3-4, 9-11, 14-15 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raj and Stevens (TCP/IP Illustrated, Vol. 1: The Protocols. Addison-Wesley: Boston, 1994.).

17. In regard to claims 3-4, Raj is applied as in claim 1. Raj fails to disclose sending test data to detect whether communication is available.

18. However, Stevens discloses use of the Ping program to test if a point on a network is reachable. The Ping program uses ICMP ECHO requests to determine whether a point on a network is connected. Examiner considers the use of the Ping program to be *send[ing] test data*. [See Stevens, pages 85-96]

19. It would have been obvious to one of ordinary skill in the networking art at the time of the invention to combine the teachings of Raj and Stevens for the purpose of testing connectivity on a network. [Stevens, 85] Raj gives motivation for the combination by stating that the network is periodically re-analyzed to see what routes are available for communicating network traffic and what routes have failed. [See Raj, column 13, line 66 – column 14, line 14] By this rationale claims 3-4 are rejected.

20. In regard to claim 9, the limitations of this claim are substantially the same as the limitations embodied within the combination of claim 1 and claims 3-4. Disabling the power to circuitry is well known in the art as using a power switch, which can be accomplished in many ways which one of ordinary skill in the art would easily be able to implement. Motivation has been previously discussed for using the teachings of Raj and Stevens to reject claims 1, 3 and 4. Therefore the grounds for rejection previously applied against claims 1, 3 and 4 are likewise applicable against claim 9. By this rationale claim 9 is rejected.

21. In regard to claim 10, Raj and Stevens are applied as in claim 9. The remaining limitations of this claim are substantially the same as the limitations embodied within claim 2. The use of Raj against claim 2 has previously been discussed, as has the motivation to combine the teachings of Raj and Stevens. Therefore the grounds for rejection against claims 1, 2, 3 and 4 are likewise applicable against claim 10. By this rationale claim 10 is rejected.

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22. In regard to claim 11, Raj and Stevens are applied as in claim 10. The remaining limitations of this claim are substantially the same as the limitations embodied within claim 4. The use of Raj and Stevens against claim 4 has been previously discussed. Therefore the grounds for rejection against claim 4 combined with the rejection against claim 10 are likewise applicable against claim 11. By this rationale claim 11 is rejected.

23. In regard to claims 14-15, Raj and Stevens are applied as in claim 12. The remaining limitations of these claims are substantially the same as the limitations embodied within the combination of claim 1 and claims 3-4. Motivation has been previously discussed for using the teachings of Raj and Stevens to reject claims 1, 3 and 4. Therefore the grounds for rejection previously applied against claims 1, 3 and 4 are likewise applicable against claims 14-15. By this rationale claims 14-15 are rejected.

24. In regard to claims 23-24, Raj and Stevens are applied as in claim 21. The remaining limitations of these claims are substantially the same as the limitations embodied within the combination of claim 1 and claims 3-4. Motivation has been previously discussed for using the teachings of Raj and Stevens to reject claims 1, 3 and 4. Therefore the grounds for rejection previously applied against claims 1, 3 and 4 are likewise applicable against claims 23-24. By this rationale claims 23-24 are rejected.

25. Claims 6-8, 17-20 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raj and Schwartz (Broadband Integrated Networks, Prentice Hall: New Jersey, 1996).

26. In regard to claims 6-8, Raj is applied as in claim 1. Raj discloses a system for shutting down a data relay apparatus if an error is detected. Raj fails to disclose the exact structure of the data relay apparatus.

27. However, Schwartz shows a commonly known implementation of a switch called a 4x4 Banyan switch. The 4x4 Banyan switch is implemented with four, 2x2 switches in a multi-stage system. The diagram shows a one directional 4x4 Banyan switch, but it would be a natural and obvious step to implement it in a bidirectional form to allow transmission from left to right and from right to left by altering the input/output buffering of the switch. The 2x2 switch matches the description of claim 7, and the 4x4 Banyan switch comprised of four 2x2 switches matches the description of claim 8. [See Schwartz, 220] If the 2x2 switches [*data relay apparatus*] were replaced by primitive versions having only one input and

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one output port instead of two input and two output ports (essentially a 1x1 switch) and a fourth apparatus (lower right hand) were removed from the diagram, a much simpler apparatus would be present that would be essentially two redundant data relay apparatuses connected to a third data relay apparatus. This would be essentially the same structure described in claim 6.

28. It would be obvious to combine the teachings of Raj and Schwartz for the purpose of implementing a scalable ATM switch. [See Schwartz, 220] Raj gives motivation for the combination by stating that another embodiment of the invention would involve a plurality of switch control mechanisms coupled together. [See Raj, column 9, lines 53-64] By this rationale claims 6-8 are rejected.

29. In regard to claims 17-20, Raj is applied as in claim 12. The limitations of these claims are substantially the same as the limitations embodied within the combination of claim 1 and claims 6-8. Therefore the grounds for rejection previously applied against claims 1, and 6-8 are likewise applicable against claims 17-20. By this rationale claims 17-20 are rejected.

30. In regard to claims 26-27, the limitations of these claims are substantially the same as the limitations embodied within the combination of claim 1 and claims 3-4. Therefore the grounds for rejection previously applied against claims 1, 7 and 8 are likewise applicable against claims 26-27. By this rationale claims 26-27 are rejected.

Response to Arguments

31. Applicant's arguments filed 4/28/2005 have been fully considered but they are not persuasive.

32. The Examiner has withdrawn the objections to the drawings, specification, and Abstract.

33. Applicant has argued that Raj fails to show *Link Aggregation multiplexing and electronically cutting off and shutting down communication lines connected to said data ports*. The Examiner has chosen to address these arguments to the extent necessary in the newly revised rejections above. See paragraph 6 for reference to the Raj reference. The Examiner also believes that this amendment warrants a rejection under 112 1st for enablement issues, as stated above.

34. Applicant has not made any substantive arguments concerning the combination of Raj and Stevens that are not addressed by the Examiner's updated rejection in paragraph 6.

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35. Applicant has not made any arguments concerning the Schwartz reference.
36. The Examiner again suggests that Applicant verify the translation of the Japanese foreign priority document, specifically with regard to *electronically cutting off and shutting down communication lines*.

Conclusion

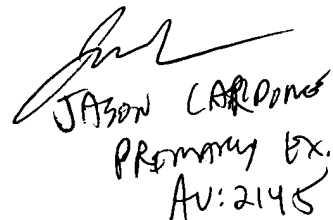
37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 571-272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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